AMENDMENTS TO THE CLAIMS

1. (cancelled)

2. (cancelled)

3. (cancelled)

4. (cancelled)

5. (cancelled)

6. (New) Apparatus for producing a high-frequency reconstruction signal based on a bandwidth-limited audio signal, comprising:

means for obtaining information, whether a to be processed passage of the bandwidth-limited audio signal has a pulse-train-like character or a non-pulse-train-like character, wherein a passage has a pulse-train-like character, when the passage includes a series of pulses having associated therewith a pulse period, and wherein a passage has a non-pulse-train-like character, when the passage does not include a series of pulses having associated therewith the pulse period;

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means for adaptively over time selecting different methods for high-frequency generation for passages to be processed based on the information; and

means for performing a selected high-frequency generation method for a passage of the bandwidth-limited audio signal to obtain the high-frequency reconstruction signal.

7. (New) Apparatus in accordance with claim 6, in which the means for obtaining is arranged for receiving a control signal indicating whether a passage has a pulse-train-like character or a non-pulse-train-like character.

8. (New) Apparatus in accordance with claim 6, in which the means for obtaining includes a detector for detecting, whether a passage has a pulse-train-like character or a non-pulse-train-like character, wherein the detector is arranged for performing a transient detection in a time domain or a peak-picking operation in the frequency domain.

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9. (New) Apparatus in accordance with claim 8, in which the detector is arranged for performing the transient detection, when the pulse period is comparatively high, and in which the detector is arranged for performing the peak-picking operation, when the pulse period is comparatively low.

10. (New) Apparatus in accordance with claim 8 or claim 9, in which the detector is arranged for performing a spectrally whiten step for spectrally whiten a passage before performing the detection.

11. (New) Apparatus in accordance with claim 8 or claim 9, in which the detector is arranged to conduct a step of

performing a peak-picking operation and a step of performing a statistical analysis of distances between picked peaks.

12. (New) Apparatus in accordance with claim 11, in which the detector is arranged to conduct a step of comparing an energy and a peak level of a signal before and after an arbitrary point so that a transient behavior in the signal is searched for.

13. (New) Apparatus in accordance with claim 11, in which the detector is arranged for conducting a step of peak-detecting on a harmonic product spectrum so that detected pitches are presented in a histogram, upon which a detection is made by comparing a ratio between pitch-related entries and non-pitch-related entries in the histogram.

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14. (New) Apparatus in accordance with any one of claims 6-9, in which the different methods for high-frequency generation include frequency-domain transpositions with different window sizes, wherein a comparatively small window size is selected for a passage having a pulse-train-like character, and wherein a comparatively long window size is selected for a passage having a non-pulse-train-like character.

15. (New) Apparatus in accordance with claim 14, in which the small window size is shorter than or equal to the pulse period.

16. (New) Apparatus in accordance with any one of claims 6-9, in which the different methods for high-frequency generation include a frequency translation for a passage having a pulse-train-like character and a frequency-domain transposition for a passage having a non-pulse-train-like character,

wherein a window size of the frequency-domain translation is larger than $1/f_i$, wherein f_i is a frequency of a truncated Fourier series.

17. (New) Apparatus in accordance with any one of claims 6-9, in which the different methods for high-frequency generation include a time-domain pulse-train transposition for a passage having a pulse-train-like character and a frequency-domain transposition having a non-pulse-train-like character, wherein the window size of the frequency-domain position is larger than $1/f_i$, wherein f_i is a frequency of a truncated Fourier series.

18. (New) Apparatus in accordance with claim 13, in which the means for performing a selected method includes:

a frequency-domain transposer,

a first analysis filterbank connected to the frequency-domain transposer,

a second analysis filterbank;

a frequency translating device being connected to an output of the second analysis filterbank,

wherein the second analysis filterbank is a filterbank of the same type as the first analysis filterbank,

a mixer for blending an output from the first filterbank and an output of the frequency translating device, the mixer being arranged for blending in accordance with a control signal to output blended spectral data, and

an envelope adjuster for performing an envelope adjustment on the blended spectral data using envelope data to provide the high-frequency reconstruction signal.

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19. (New) Method for producing a high-frequency reconstruction signal based on a bandwidth-limited audio signal, comprising the following steps:

obtaining information, whether a to be processed passage of the bandwidth-limited audio signal has a pulse-train-like character or a non-pulse-train-like character, wherein a passage has a pulse-train-like character, when the passage includes a series of pulses having associated therewith a pulse period, and wherein a passage has a non-pulse-train-like character, when the passage does not include a series of pulses having associated therewith the pulse period;

adaptively over time selecting different methods for high-frequency generation for passages to be processed based on the information; and

performing a selected high-frequency generation method for a passage of the bandwidth-limited audio signal to obtain the high-frequency reconstruction signal.

20. (New) Method of encoding an audio signal to obtain an encoded base band audio signal, the method comprising the following steps:

detecting, whether a to be processed passage of the audio signal has a pulse-train-like character or a non-pulse-train-like character, wherein a passage has a pulse-train-like character, when the passage includes a series of pulses having associated therewith a pulse period, and wherein a passage has a non-pulse-train-like character, when the passage does not include a series of pulses having associated therewith the pulse period; and

associating a control signal to the encoded base band audio signal, the control signal indicating, whether a passage of the encoded base band audio signal has a pulse-train-like character or not.

21. (New) Method in accordance with claim 20, in which the step of detecting detects whether a passage has a pulse-train-like character or a non-pulse-train-like character by performing a transient detection in a time domain or a peak-picking operation in the frequency domain.

22. (New) Apparatus for encoding an audio signal to obtain an encoded base band audio signal, comprising:

means for detecting, whether a to be processed passage of the audio signal has a pulse-train-like character or a non-pulse-train-like character, wherein a passage has a pulse-train-like character, when the passage includes a series of pulses having associated therewith a pulse period, and wherein a passage has a non-pulse-train-like character, when the passage does not include a series of pulses having associated therewith the pulse period; and

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means for associating a control signal to the encoded base band audio signal, the control signal indicating, whether a passage of the encoded base band audio signal has a pulse-train-like character or not.